HBV ECHO Case Recommendations

Session 16: December 12, 2022

Case Recommendations and Considerations: 39-year-old woman from Marshall Islands who has a family history of diabetes and HCC due to HBV, presents with chronic intermittent abdominal pain and was found to have chronic HVB, increased liver echogenicity on ultrasound, and newly diagnosed diabetes.

CATEGORY	RECOMMENDATIONS	Relevant Presentation Question or Concern	REFERENCES/ RESOURCE LINKS
History			
Physical Exam			
Diagnostic evaluation	1. Check Hepatitis D virus antibody for a baseline. This can be performed any time (not necessarily before treatment). She also needs to be started on HCC surveillance every 6 months especially due to her family history. 2. Fat itself cannot be detected on ultrasound. Rather, this is typically reported by radiology as "increased echogenicity" which could be from fatty liver, but could also reflect fibrosis or inflammation. We should be careful about labeling a patient with fatty liver disease based on ultrasound findings alone. We should also confirm that patients who present with elevated LFTs and "fatty liver" or "increased echogenicity" on ultrasound do not have other ongoing liver pathology such as HBV, and avoid anchoring on the diagnosis of NAFLD. 3. People with fatty liver disease don't always have elevated liver enzymes. As NASH progresses to fibrosis, liver enzymes can normalize, so the elevation in ALT is not a reliable way of ruling in	1. Should there be any further workup prior to starting treatment? 2. How should we interpret "fatty liver" being reported on ultrasound? 3. How much should we work up fatty liver before we decide to diagnose the patient with fatty liver?	

	disease. Workup and treatment should be individualized based on the treatment setting and patient phenotype e.g. if patient has risks for metabolic syndrome, Fibroscan shows fibrosis and steatosis, and ALT > AST, you can be fairly reassured that the patient has fatty liver disease. If LFTs improve with weight loss and lifestyle modification, we can be even more assured that the patient has fatty liver. However, if the patient does not have the typical phenotype or displays other features typical of other pathologies then it is more reasonable to take a comprehensive approach to workup. 4. More frequent screening is unlikely to benefit this patient	4. Should this patient's HCC screening interval be reduced given that she may return to the Marshall islands soon?	
Medication Therapy & Adjustments	1. This patient is appropriate for treatment with TAF or TDF. It remains unclear whether the elevated LFTs are due to NASH or HBV. A liver biopsy could distinguish between the two, but is not necessary at this time. Her family history of a father who died from HCC from HBV strengthens the recommendation for initiating treatment. 2. TAF and TDF are the same drug (tenofovir) in different formulations. TDF is older and more available and should be okay as a treatment option for now. The TAF formulation more effectively delivers a lower concentration of drug and so has fewer side effects over time. The risk for pregnancy is lower right now as the patient is not currently with her sexual partner. TAF is safe and has been studied extensively in the HIV	1. What is the most appropriate treatment for this patient? 2. What is the most appropriate treatment option for women of reproductive age who are not on contraception?	

	population for many years and teratogenicity is low risk. A study from China on TAF in pregnancy did not show adverse maternal-fetal outcomes. Please refer to the session on HBV in pregnancy for further information 3. The patient should be treated now, despite the possibility that she may move back to the Marshall Islands soon. The patient may be able to access somewhat cheaper medications through https://costplusdrugs.com (Mark Cuban website). She is eligible for medications through Medquest while she maintains residence in Hawaii. 4. Truvada may not be recommended in cis-gendered women due to lack of available evidence. However, the availability of Truvada in Marshall Islands should be investigated	3. What is the approach to this patient who may face the possibility of treatment discontinuation due to her current social situation? 4. Could this patient be started on Truvada (HIV medication that includes Tenofovir) as a way to continue treatment while in the Marshall Islands? (HIV treatment is available there, but HBV treatment is not)	The Challenges of Hepatitis B Treatment in the US-Associated Pacific Islands HAWAIʻI JOURNAL OF HEALTH & SOCIAL WELFARE, SEPTEMBER 2020, VOL 79, NO 9
Vaccination			
Social Determinants of Health (SDOH)	1. Hepatitis B treatment is not available in the Marshall Islands, although HIV treatment is. As long as the patient has claimed residence in Hawaii they can continue their COFA Medicaid coverage. Once they leave, they are covered for 6 additional months, but lose insurance coverage thereafter.	1. Is hepatitis B treatment available in the Marshall Islands?	
Behavioral Health	1. It is important to develop a therapeutic relationship to help the patient understand the importance of continuity of treatment. Treatment	1. In challenging social situations where a patient is frequently traveling,	

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	should be started, even if the patient's ability to obtain treatment in the future is ambiguous. It is often necessary to adapt the treatment plan over time and adjust to accommodate the patient's personal barriers.	how can we work with a patient to overcome barriers to treatment?	
Screening			
Risk Reduction	1. The patient's family members have unknown HBV status, and this should be further investigated with her close contacts tested and vaccinated as indicated from test results.	1. Family members' HBV status is currently unknown	
Other	1. Anecdotally, when the Liver center moved from St. Francis to Queens, many patients lost contact with their providers and therefore were not taking medications for a period of time. Although most of these patients did well off antiviral therapy, there are also patients who are hospitalized with reactivation hepatitis B and require liver transplantation. 2. There is no straightforward answer to this. Reactivation occurrence and clinical consequences are variable. If the treatment duration is certain to be short (e.g., only 2-3 months) then deferring treatment may be reasonable, understanding the risks of not treating. If the treatment duration is not known to be brief or is open-ended, then initiating antivirals based on the indications at the point of time when the indications are relevant is recommended.	1. How dangerous is reactivation hepatitis B? 2. Can the risk of reactivation hepatitis B be quantified based on the treatment circumstances?	https://www.hawaiilearning.org/wp-content/uploads/2022/11/Clinical-Liver-Disease-2020-Myint-Reactivation-of-Hepatitis-B-Virus-A-Review-of-Clinical-Guidelines.pdf